

ATTACHMENT II-1-6

LEACHATE, EVAPORATION, AND DECONTAMINATION  
WASTE MANAGEMENT PLAN

1. APPLICABILITY

The requirements of this plan apply to the management of the Evaporation Tanks, leachate, and wastes from decontamination activities.

2. IDENTIFICATION AND OPERATION OF TANK SYSTEMS

These requirements describe the feed system and safety cut-off system for the Evaporation Tanks identified in Module IV, *Storage and Treatment in Tanks*.

- a. Specifications for Evaporation Tanks are listed in Table IV-1 of Module IV. Evaporation tanks shall be open to the atmosphere and may have ancillary piping used for transfers and sparging.
  - i. Wastes shall be transferred into the Evaporation Tanks in accordance with the procedure below. This procedure shall describe the feed system and safety cut-off system that shall be used for transferring liquids to the Evaporation Tank when using a pumping device.
    - A. Two people shall be present for liquid transfers.
    - B. Prior to a transfer, the operator shall determine that the volume to transfer does not exceed the available volume in the Evaporation Tank up to the freeboard limit.
    - C. Hose and piping shall be inspected before use to ensure general integrity. Connections shall be made to prevent leaks, e.g., using gaskets or fittings.
    - D. During a transfer, the operator shall ensure that the following items, when they are a part of the transfer operation, are controlled or observed to prevent a spill, leak or release:
      - (1) the influent stream,
      - (2) the effluent stream,
      - (3) the hose or transfer piping,
      - (4) the pumping device,
      - (5) the liquid level in the tank,
      - (6) signals from the electronic level indicators.

- E. If the visual tank alarm activates during the transfer, the operator shall stop the transfer unless approval has been granted by the Mixed Waste Facility Manager to proceed to the level at which the audio alarm is activated.
  - F. The transfer shall be performed from within the secondarily-contained area adjacent to the Evaporation Tanks.
  - G. Following the transfer, the operator shall ensure that the liquids remaining in the hoses and/or pipes are transferred to the Evaporation Tank and that the transfer is completed in a manner to prevent a spill, leak or release.
- ii. Liquid waste may be transferred directly into an Evaporation Tank from a container.
  - iii. The Evaporation Tanks shall be coated on the interior with an appropriate protective coating that is resistant to corrosion. The Evaporation Tanks' exterior shall be painted to protect from corrosion.
  - iv. The treatment process used in the Evaporation Tanks shall be evaporation. The evaporation process may be aided by air sparging or by spray evaporation. These systems shall not be used when wind conditions may cause the liquid waste to fall outside the tank.
- b. Decontamination Pad Tank System. The Decontamination Pad Tank System is described in Module IV, *Storage and Treatment in Tanks*. The Decontamination Pad Tank System receives wastes by gravity flow from the indoor sump and outdoor decontamination pads located on the west end of the Mixed Waste Storage Building.
- i. Liquids identified in Section 4.a. of this Attachment may be pumped to or from the Decontamination Pad Tank System.
  - ii. When permanent piping for pumping to or from the Decontamination Pad Tank System is changed or installed, prior to use, the installation shall be evaluated by an independent, Utah-registered professional engineer. Documentation of such evaluations shall be maintained in the operating record for a period of three years.
  - iii. In-line filters may also be included in the piping to or from the Decontamination Pad Tank System. The in-line filters shall be managed as Hazardous Waste.

- iv. Fresh water for decontamination shall be introduced into the Decontamination Pad Tank System by either pumping directly into the Tank system, or by pumping or discharging onto the Decontamination Pad and allowing the fresh water to flow into the Decontamination Pad Tank System.
- v. The Decontamination Pad Tank System is constructed of carbon steel and shall be coated on the interior and exterior with a corrosion-protective coating. The Decontamination Pad Tank System shall be secondarily contained in the concrete vault west of the Mixed Waste Storage Building. The interior of the concrete vault shall be maintained with a protective coating which is resistant to corrosion.
- vi. The Permittee may make changes or repairs to the Decontamination Pad and its sumps provided that prior notice is made to the Executive Secretary and that such changes or repairs are conducted in accordance with a construction quality assurance project plan.
- vii. Decontamination Pad Sumps shall be inspected in accordance with Attachment II-3, *Site Inspection Plan*.

### 3. PROVISIONS FOR ANNUAL TANK INTEGRITY TESTING

Waste in the Evaporation Tanks or the Decontamination Pad Tank System may be transferred to tanks or containers and managed in accordance with the provisions of UAC R315-5-3 for a period of up to 15 days for purposes of performing the annual tank integrity test or for purposes of sludge removal. Additional transfer time may be obtained upon prior written approval by the Executive Secretary.

### 4. WASTE SOURCES

- a. Evaporation Tanks. Only compatible liquids from the following sources shall be placed in the Evaporation Tanks at the facility:
  - i. washdown water from decontamination areas,
  - ii. leachate,
  - iii. aqueous liquid waste from the on-site laboratory,
  - iv. purge water from groundwater monitoring,
  - v. liquids from decontamination and washdown operations in the treatment facility,
  - vi. precipitation and precipitation run-off,
  - vii. washdown water from the container storage area,
  - viii. liquid wastes from the Decontamination Pad Tanks,
  - ix. liquids collected from spills,

- x. liquid waste generated from treatment operations, and
  - xi. other aqueous liquid waste generated by the Permittee.
- b. Decontamination Pad Tank System. Waters for decontamination purposes are placed in the Decontamination Pad Tank System. Materials from the decontamination operations are collected in these tanks. Only wastes and materials from the following sources shall be placed in the Decontamination Pad Tank System at the facility:
- i. produced-well waters or commercially-obtained waters,
  - ii. washdown water and wastes from decontamination activities,
  - iii. precipitation and precipitation run-off,
  - iv. washdown water from the Container Storage Area,
  - v. liquid from the Evaporation Tanks, and
  - vi. purge water from uncontaminated groundwater monitoring wells.
- c. Leachate from the Embankment. Leachate removed from the leachate pipes may be managed in the following units:
- ii. Evaporation Tanks
  - ii. tanks or containers managed in accordance with the provisions of UAC R315-5-3
- d. Poned Leachate. Poned leachate from within the Mixed Waste Landfill Cell may be collected from the cell and managed as leachate from the embankment.

6. EMPTYING TANKS.

When the Decontamination Pad Tank System or an Evaporation Tank is emptied for the annual inspection, the Permittee shall triple rinse the tank. The Permittee shall maintain documentation in the operating record of the triple rinsing and emptying process.

7. SLUDGE MANAGEMENT

- a. Inspections shall be conducted in accordance with Attachment II-3, *Site Inspection Plan*.
- b. The sludge from any permitted tank in accordance with Module IV, *Storage and Treatment in Tanks*, shall be removed annually or prior to the accumulation of a depth of eight inches unless additional time is approved in writing by the Executive Secretary.

8. EVAPORATION TANK SLUDGE REMOVAL AND MANAGEMENT

- a. When an operator is inside of the evaporation tank during sludge removal operations, at least one other worker shall remain outside of the Evaporation Tank to provide immediate assistance.
- b. Removed sludge may be managed in secondary containment as a two-phase material until treatment occurs.
- c. Sludge removed from the evaporation tanks shall carry the applicable EPA hazardous waste code F039 if derived from leachate, and shall meet all applicable treatment standards prior to disposal unless the sludge is from a tank that has only received non-leachate liquid waste.

9. PROFILE REQUIREMENTS

The Permittee shall maintain a current waste profile record on the contents, both liquid and sludge, of the waste in the Evaporation Tanks. The waste profile records shall be updated annually.

10. FREEBOARD REQUIREMENTS

The Permittee shall maintain a minimum of one foot of freeboard in each Evaporation Tank System and a minimum of six inches of freeboard in the Decontamination Pad Tank System.

11. LEVEL INDICATORS

The Evaporation Tanks shall be equipped with a level indicator which will activate a visual alarm when the level of liquid in the Evaporation Tank is detected by the level indicator at a distance of two feet from the top of the Evaporation Tank. The tanks shall be equipped with an audio alarm that will activate when the level indicator detects liquid at a distance of 1.25 feet from the top of the Evaporation Tank.

END OF ATTACHMENT II-1-6